September 1, 1948

Mr. Earle Willoughby Civil Air Transport No. 17. The Bund. 7th Floor

Ref: W.P. 9-5

Shanghai, China

Dear Earle:

I am addressing this letter to you since it concerns accounting of funds. It does, of course, concern engineering and procurement as well, but since I don't have enough reference material to send everyone copies, I am going to get out of channels a bit and ask you to coordinate it. I have attached Pacific Airmotice's Invoices, No. E2142 and E2148. You will note that the R-2800 flat rate overhaul charge for engines is \$3,750. As you go through the Invoice No. E-2142, you will note the extracharges for corroded parts. In some instances, the total charges in our engines run almost \$5,000, which is quite difference between the flat labor charge. A goodly protion of these charges in many instances is due to the effects of corrosion which is preventable.

Our agreement with Pacific Airmotive on the flat rate of \$3,750 includes overhaul and replacement of parts excluding propeller shafts, crank shafts, crank cases, etc. It does include all triant to a pash roul and up to 50 per cent cylinder replacement. Of Invoice No. 2148 you will note that we are charged \$97.50 for one new cylinder. This new cylinder was the tenth cylinder replaced in this engine because of corrosion and, therefore, not included in the freight overhaul rate. If nothing is done about this corrosion problem in the future as per our many letters concerning corrosion in the past, it will be impossible for as to accurately astimate your engine overhaul cost.

We have talked with Pacific Airmctive concerning overhaul costs and have promised them that something would be done about corrosion. They have agreed to give us a lower rate. Recently we received a shipment of engines that had been sprayed on the outside with some part of oil, and the exterior corrosion was considerably less than previously experienced. Accordingly, Pacific atractive has reduced their flat overhaul obergy to \$2,050.

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Now, Earle, since you are number one chief exchecker, I am sure that you will have somewhat more than casual interest in seeing this price come down more than \$200. I think we can get this reduction is we start receiving engines that are clean internally as well as externally.

With best regards, I am

Sincerely yours,

HaLa Richardson

HLR/ge cc: President Donaldson R.&R. (2) Lonborg Civil Air Transport Suite B Hotel Washington Washington 4. D.C.

Attention:

Mr. H. L. Richardson

Director, Research and Development

## Dear Bill:

We are enclosing six copies of our Invoice E2142 which outlines the charges involved in the major overhaul of four (4) R-2800-75 engines and two (2) R-1830-90C engines. In accordance with your letter, reference WP: 8-49, we have attempted to provide you with a detailed account outlining the various charges which occurred on this particular group of engines. You will note that the additional charges resulted principally from two basic causes:

- 1 Excessive corrosion which caused replacement of some crankshafts and propeller shafts, as well as, a high replacement factor of both new and ground cylinders.
- 2. Some of the engines were incomplete when received by us particularly in respect to carburetor, magnetos, and standard engine boxes.

We trust that the information is sufficiently detailed for your accounting records. In the event that it is not, we would be very pleased to provide you with any additional specific information in connection with these charges if requested.

Incidentally: the engines we received recently appeared to be in a better condition externally than the first 17 which arrived at our shops. The external parts of the engines appeared to have been sprayed with oil and the prop shaft was better protected. As far as we can determine, however, no effort had been made to preserve the interior of the engine in accordance with modern pickling methods:

Thank you for your attention

Yours very truly

PACIFIC AIRMOTIVE CORPORATION

JOHN D. HARRIS - Export Manager

JDH/op encl (6)